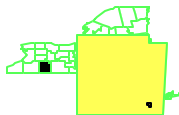


SINCLAIR REFINERY

NEW YORK

EPA ID# NYD980535215



EPA REGION 2
CONGRESSIONAL DIST. 31
Allegany County
S. Brooklyn Avenue in Wellsville

Site Description

The Sinclair Refinery site covers approximately 100 acres adjacent to the west bank of the Genesee River, one-quarter mile south of downtown Wellsville. The refinery was built in the late 1800's and operated by the Wellsville Refining Company until 1919 when the Sinclair Refining Company (now the Atlantic Richfield Company, or ARCO) purchased the property and operated the refinery until 1958, when a fire ended operations. After closure of the refinery, a majority of the property was transferred to the Village of Wellsville, which subsequently conveyed land parcels to various entities, including the State University of New York and the several companies now occupying the site. Various types of wastes including cloth filters, oil sludges, contaminated soil, pesticides, heavy metals, and fly ash were disposed of in two on-site landfills over a 30-year period. Prior to the site remediation, the landfill area of the site consisted of a 9-acre Central Elevated Landfill Area, a 2-acre South Landfill Area, and a 1-acre sand and gravel area between the two landfills. The landfill area of the site is located at the extreme southern end of the site, along the west bank of the Genesee River, approximately 1 and 1/4 miles upstream from the Village of Wellsville's former water supply intake pipe. The EPA, the State, and ARCO relocated the town's river water intake to a point upstream of the landfill in 1988, so that any contaminants entering the river through erosion of the landfill would no longer threaten the water supply. Before any steps to remediate the site were initiated, the river was slowly eroding the ground under the landfill, creating the potential for contamination of off-site surface waters if the river's flood waters were high enough to reach the landfill. Approximately 6,000 people live within a mile of the landfill. Several businesses and the State University of New York at Alfred's Wellsville Campus are located on the refinery portion of the Sinclair property. Approximately 500 people use the buildings located on this part of the site.

Site Responsibility:

This site is being addressed through a combination of Federal, State, municipal, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 07/01/82

Final Date: 09/01/83

Threats and Contaminants



Groundwater and soils contain volatile organic compounds (VOCs), semi-volatile organic compounds, and heavy metals. Potential human exposure from drinking water has been eliminated as a result of the relocation of the Wellsville Water Treatment Plant intake pipe. Inadvertant ingestion of contaminated groundwater at the site could present a risk. Prolonged exposure to contaminated dust from isolated "hot spots" on site were determined to also present a risk.

Cleanup Approach

The site is being addressed in three stages: immediate actions and two long-term remedial phases focusing on stabilization of the landfill and source control in the refinery area of the site.

Response Action Status



Immediate Actions: In 1983, ARCO removed approximately 10 loose drums from the Genesee River. In 1983, the State of New York diverted the Genesee River away from the eroding face of the landfill and placed dredged material there as temporary protection against erosion. Later in 1983, the Village of Wellsville, Allegany County, and the State of New York stabilized the berm constructed to divert the Genesee River to protect the eroding landfill. In 1988, the Town's river water intake was relocated upstream from the landfill.



Stabilization of the Landfill: The EPA selected the following remedies to stabilize the eroding landfill: (1) remove approximately 300 drums from the landfill and dispose of them off-site; (2) excavate wastes from the 2-acre South Landfill Area; (3) place clean fill in the excavated area; (4) consolidate excavated wastes into the Central Elevated Landfill Area; (5) cap consolidated wastes in the Central Elevated Landfill Area; (6) partially channelize the Genesee River to protect the landfill from erosion or flooding; and (7) construct a fence around the entire landfill to secure it. The EPA approved the designs to implement the river channelization portion of the remedy in February 1990 and the landfill consolidation portion in September 1990. Fieldwork commenced in 1990, and both of these activities were completed in 1991. The design of the cap for the consolidated landfill was completed at the end of 1991, with site construction activity commencing in 1992. Construction of the landfill cap was completed in January 1994.



Source Control/Refinery Site: The EPA selected the following remedies to address the refinery portion of the site in a Record of Decision signed in 1991: (1) the excavation of surface soil "hot spots" which exceed health-based cleanup criteria and their disposal in the Central Elevated Landfill Area; (2) pumping contaminated groundwater and treating it to health-based levels before discharge; and (3) monitoring site media, including the groundwater and surface water, for any possible contaminant migration. ARCO agreed to implement the soils remedy as per an order signed by the EPA in May 1992. The excavation and consolidation of surface soils commenced in 1992 and was completed in 1993. ARCO agreed to implement the groundwater remedy as per an order signed by the

EPA in September 1992. The design to remediate the contaminated groundwater at the site was initiated in 1993 and was completed in March 1995. Construction of the groundwater remedy commenced late in 1994, concurrent with the final design development. Operation of the groundwater treatment system began in July 1995. Groundwater treatment, has been implemented under a phased approach, with the first phase of treatment accomplished primarily through air sparging and soil vapor extraction. The system has undergone minor modifications to maximize treatment potential since being implemented in 1995. In 2002, citing diminishing returns from phase one systems, EPA directed ARCO to begin the second phase of groundwater remediation, which will focus on expanded pumping and treatment and containment. A work plan for the design of the second phase of groundwater remediation was completed in July 2003. Investigatory field work necessary for phase two design development began in July 2003 and was completed in December 2003. The design of the phase two remedy will be developed in 2004-2005. The phase one air sparging and soil vapor extraction systems have been decommissioned; however, phase one pumping and treatment of groundwater will continue and be integrated into the phase two remedy.

Other Actions: Three removal actions were completed at the site between 1991 and 1995. These actions included the demolition and removal of an asbestos-containing powerhouse building associated with former refinery operations, including the demolition of a 245-foot concrete and brick smokestack and the excavation and removal of two underground storage tanks uncovered in the process of the powerhouse removal. Additionally, an oil-water separator was decommissioned and removed from the site and a drum removal was performed at a building used as a storage facility by a previous site occupant.

Site Facts: Addressing the contaminated groundwater at the site comprises the final remedial action. Groundwater treatment, initiated in 1995, continues at the site. EPA has directed ARCO to evaluate ways to terminate the migration of light non-aqueous phase liquid from the site into the Genesee River as part of the second phase of groundwater remediation. The second phase of remediation will include and expanded pumping and treatment of groundwater and containment.

Cleanup Progress



The removal of many sources of contamination and actions taken to ensure a safe drinking water supply have made the site safer. The following summarizes cleanup progress for the two operable units:

OU1: In 1985, the EPA issued a Record of Decision which established the consolidation and capping of two small landfills and partial channelization of the adjacent Genesee River as the remedy for OU1. All remedial activities under OU1 were completed by 1994, with approximately 464,640 tons (290,400 cubic yards) of waste material contained within the landfill.

OU2: In 1991, the EPA issued a Record of Decision which established the excavation and disposal of surface soils exceeding the remedial cleanup criteria for arsenic and lead and the treatment of contaminated site groundwater as the remedy for OU2. Completion of the surface soils excavation was accomplished in 1994, with the removal of approximately 24,000 tons (15,000 cubic yards) of contaminated soil. Groundwater treatment, accomplished primarily through air sparging and soil vapor extraction, was initiated in 1995 and is on-going. To date, more than 154,000 pounds of VOC

contamination has been removed from the groundwater. A report summarizing system performance since its inception was received in September 1999 and indicated that the current system has reached the point of diminishing returns. Consequently, in 2002, EPA directed ARCO to begin the second phase of groundwater remediation. Additionally, since 1997, the site has experienced an intermittent migration of light non-aqueous phase liquid (LNAPL) into the Genesee River from various seep points. Currently this seepage is being addressed through the placement of oil booms and absorbant pads. As a result, EPA has directed ARCO to undertake a study to determine the nature and extent of LNAPL contamination and to incorporate a plan for the termination of the LNAPL seeps in the design of the second phase of groundwater remediation. The LNAPL study has been integrated into the work plan for a pre-design field investigation. The implementation of this work plan began in July 2003 and was completed in December 2003. The design of the second phase of groundwater remediation, which is to include an expanded pumping and treatment program and groundwater containment, is planned to be completed in 2005. Once implemented, the second phase of remediation will permanently mitigate contaminant migration from the site to eliminate all risks to the site populace and to protect the Genesee River.

Site Repository



David A. Howe Library, 155 North Main Street, Wellsville, New York, 14895.